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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,051	05/09/2006	Terry L. Alford	07-1233-US	6367

7590 12/04/2008  
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EXAMINER
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ISAAC, STANETTA D

ART UNIT	PAPER NUMBER
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2812

MAIL DATE	DELIVERY MODE
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12/04/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/579,051	<b>Applicant(s)</b> ALFORD ET AL.	
	<b>Examiner</b> STANETTA D. ISAAC	<b>Art Unit</b> 2812	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-29 is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

This Office Action is in response to the amendment filed on 8/04/08. Currently, claims 1-29 are pending.

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Cayrefourcq et al (US Patent 7,176,108, hereinafter referred to as “Cayrefourcq”).

3. Cayrefourcq discloses the semiconductor device and method as claimed. See figures 1-3, and corresponding text, where Cayrefourcq teaches, pertaining to claims 1, 8, and 14, a flat panel display, electronic device, and electronic apparatus, comprising: a flexible substrate 7 (col. 7, lines 55-60) a single crystalline silicon substrate 5 disposed adjacent to the flexible substrate (figure 2; col. 7, lines 14-17 and 53-55), wherein bonding between the flexible substrate and the single crystalline silicon substrate is induced by an ion implantation process through the flexible substrate to an interface of the flexible substrate and the single crystalline silicon substrate (figures 2 and 3; col. 7, lines 4-52, *Note*: the Examiner takes the position that process limitations hold no patentable weight on product claims); and a plurality of semiconductor devices formed on the single crystalline silicon substrate (col. 1, lines 12-16).

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4. Cayrefourcq teaches, pertaining to claims 2, 9, and 17, wherein the ion implantation process uses a noble gas (col. 6, lines 55-59).

5. Cayrefourcq teaches, pertaining to claims 3, 10, and 18, wherein the ion implantation process uses a gas selected from the group consisting of hydrogen, helium, xenon, and krypton (col. 6, lines 55-59).

6. Cayrefourcq teaches, pertaining to claims 4, 11, and 19, wherein the flexible substrate includes a polymer material (col. 7, lines 55-60).

7. Cayrefourcq teaches, pertaining to claims 5, 12, and 20, wherein the flexible substrate includes a material selected from the group consisting of polymer, plastic, paper, flexible glass, and stainless steel (col. 7, lines 55-60).

Cayrefourcq teaches, pertaining to claims 6, 13, and 21, wherein the plurality of semiconductor devices includes thin film transistors (col. 1, lines 12-16).

***Allowable Subject Matter***

8. Claims 22-29 are allowed over the prior art of record.

9. The following is an examiner's statement of reasons for allowance: the prior art of record and the Examiner's knowledge does not teach or render obvious, at least to the skilled artisan, the instant invention regarding a method of forming an electronic apparatus, particularly characterized wherein bonding between the flexible substrate and the single crystalline silicon substrate is induced by an ion implantation process through the flexible substrate to an interface of the flexible substrate and the single crystalline silicon substrate, as detailed in claim 22.

Claims 23-29 depend from claim 22.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Response to Arguments***

10. Applicant's arguments filed 8/04/08 have been fully considered but they are not persuasive. In the Remarks on pages 6-7:

11. Applicant raises the clear issue as to whether Cayrefourcq suggests bonding between the flexible substrate and the single crystalline silicon substrate is induced by an ion implantation process through the flexible substrate to an interface of the flexible substrate and the single crystalline silicon substrate.

12. The Examiner takes the position that since claims 1-21 are drawn to device claims, process limitations hold no patentable weight within product claims. Therefore, the claim only requires the flexible substrate and the single crystalline silicon substrate to be bonded adjacent to each other at the interfaces of both substrates, where Cayrefourcq teaches this limitation.

### ***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STANETTA D. ISAAC whose telephone number is (571)272-1671. The examiner can normally be reached on Monday-Friday 9:30am -6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Garber can be reached on 571-272-2194. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Stanetta Isaac  
Patent Examiner  
December 1, 2008

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/Charles D. Garber/

Supervisory Patent Examiner, Art Unit 2812